

Quantitative and Qualitative Monitoring of Public Attendance in Natural Preserves on the Southern Shore of Lake Neuchâtel (CH): A Necessary Tool to Manage Public Information and Prevent Infractions.

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Introduction

The Southern shore of Lake Neuchâtel (CH) is well known for the beauty of its landscape of wetlands and natural surroundings of national and international importance, but also for its shallows, much appreciated for pleasure sailing, which are fueling an increasing touristic interest since 50 years. Some 5100 docking places, 3500 camping sites and 1000 second homes contribute in summer to a tenfold population increase for some communes. The creation of seven type IV (IUCN) preserves was planned for long time. However, nearly 20 years were needed for implementation, owing to oppositions by local collectivities and populations. Human activities are since regulated and, in most sensitive places, public access is limited to foot- and cycle paths.

Forecasting conflicts, the Group for Study and Management has initiated since 1995 a series of qualitative and quantitative surveys to better understand the profile of potential visitors, their awareness of rules to adopt in a protected areas, as well as their expected impact.

Methods

A large-scale survey allowed interviewing 456 persons between May 15 and October 20, 2002. Counts were also performed to quantify the flow

and time distribution of visitors on different paths. Three counting devices were tested between 2001 and 2004, two of which automated and one manual, requiring staff presence in the field.

Between 2001 and the end of 2005, 73 days of manual counting were carried out on four different sites. Furthermore, pedestrian automatic counting installations were installed in four sites, adding up nearly 1300 days of uninterrupted counting. A test of automatic counting of bicycle traffic on one site was also achieved during 11 days.

Results

From our surveys, the majority of the people using pathways were regular customers from the region or neighboring cantons (>75% had already been there "more than once"). A little more than half were here only for a day (53%), a third (30%) were staying from a few days to more than 2 weeks, the remaining being residents. Visitors were equally distributed among loners, couples, families and groups. Half the people came by car. The option chosen for hosting was camping for 37%, while 14% possessed a second home in the vicinity. Finally, 77% were between 30 and 70 years old, while 5% only were below 20.

Automatic counts realized on pathways have shown that preserves are mainly visited by day, from late morning to late afternoon, up to late evening dur-

ing summer. Attendance varies strongly depending on the month. Outside holidays, visits are more frequent during weekends but vary with climatic conditions. Depending on place, attendance ranges from 45 to 125 persons per day (annual mean), being maximal in summer (91 to 242 persons per day, July/September mean).

From our manual counts, the share of bicycles may reach 50% on authorized pathways, and up to 78 - 98% on cycle paths Attendance is also significantly larger during the weekends than during working days (respectively 518 and 355 passing per day).

Between 2/3 and 3/4 of interviewed people declared to come here to promenade and to enjoy the

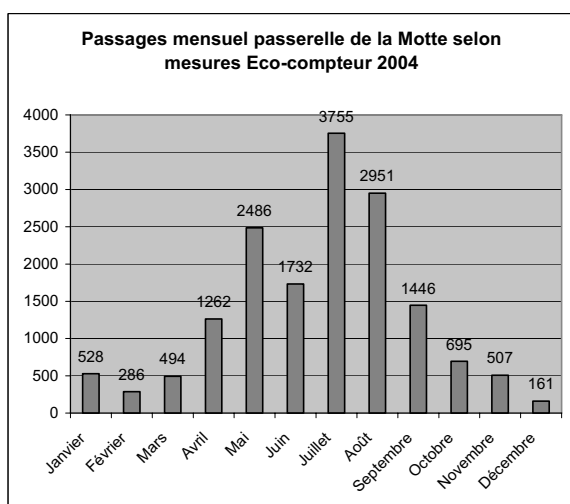


Figure 1: Eco-meter measurements: monthly passages on the elevated pathway.

tranquility and natural character of the shore. Depending on the place considered and access to the Lake, 10 to 15% of people declared to come first for sport and swimming, not for nature.

Conclusion

A conclusion from our 2002 survey is that, despite the high number of information panels installed in natural preserves, 58% only had seen and read panels, 24% had seen but not read them, while 18% had not seen them. As a result, public awareness of rules of behavior was often limited. Though 45% mentioned “do not disturb fauna”, only 12% knew that dogs must be on leash, as corroborated by the listing of infractions in 2002: out of 3200 infractions noted during 4000 hours of supervision, 845 had to deal with unleashed dogs.

A similar conclusion is reached concerning beach equipment and bathing, the impact of which on fauna is largely unknown by the public, leading to more than 1400 infractions during the monitoring period.

Counting allows controlling the possible impact of the public on the sensitive species by obtaining information on the periods of disturbances and the importance of these disturbances. Moreover, they allow identifying the zones of major public frequentation. This information will be of primary importance for the future actions of conservation of the sensitive species as well as the management and the maintenance of the infrastructures in the Grande Cariçaie.

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